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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,133	10/09/2001	Shunpei Yamazaki	SEL 281	4744

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EXAMINER

KEBEDE, BROOK

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,133

Applicant(s)

YAMAZAKI ET AL.

Examiner

Brook Kebede

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-11,17-19,33-35,59-61 and 64-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11,17-19,33-35,59-61 and 64-75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/15/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 15, 2004 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 9-11, 17-19, 33-35, 59-61 and 64-75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 9 recites the limitation "wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverse bias voltage" in lines 8-9. However, the recited limitation does not have support in the specification as originally filed for the following reasons:

Mathematically speaking an absolute value of any number is a positive number, i.e., $|+X| = X$ or $|-X| = X$. In order to determine the absolute value of the first and the second reverse bias voltages, the numerical value of these voltages need to be disclosed in the specification as originally filed. The specification as well as the drawings of the instant

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application does not disclose numerical values of either the first or the second bias voltages. As result the claim as amended raises new matter. Therefore, claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 17 recites the limitation “wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverses bias voltage” in lines 10-12.

However, the recited limitation does not have support in the specification as originally filed for the following reasons:

Mathematically speaking an absolute value of any number is a positive number, i.e., $|+X| = X$ or $|-X| = X$. In order to determine the absolute value of the first and the second reverse bias voltages, the numerical value of these voltages need to be disclosed in the specification as originally filed. The specification as well as the drawings of the instant application does not disclose numerical values of either the first or the second bias voltages. As result the claim as amended raises new matter. Therefore, claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 33 recites the limitation “wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverses bias voltage” in lines 8-9. However, the recited limitation does not have support in the specification as originally filed for the following reasons:

Mathematically speaking an absolute value of any number is a positive number, i.e., $|+X| = X$ or $|-X| = X$. In order to determine the absolute value of the first and the second reverse bias voltages, the numerical value of these voltages need to be disclosed in the specification as originally filed. The specification as well as the drawings of the instant application does not disclose numerical values of either the first or the second bias voltages. As result the claim as amended raises new matter. Therefore, claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 64 recites the limitation "wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverses bias voltage" in lines 8-9. However, the recited limitation does not have support in the specification as originally filed for the following reasons:

Mathematically speaking an absolute value of any number is a positive number, i.e., $|+X| = X$ or $|-X| = X$. In order to determine the absolute value of the first and the second reverse bias voltages, the numerical value of these voltages need to be disclosed in the specification as originally filed. The specification as well as the drawings of the instant application does not disclose numerical values of either the first or the second bias voltages. As result the claim as amended raises new matter. Therefore, claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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Claim 68 recites the limitation “wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverse bias voltage” in lines 9-10. However, the recited limitation does not have support in the specification as originally filed for the following reasons:

Mathematically speaking an absolute value of any number is a positive number, i.e., $|+X| = X$ or $|-X| = X$. In order to determine the absolute value of the first and the second reverse bias voltages, the numerical value of these voltages need to be disclosed in the specification as originally filed. The specification as well as the drawings of the instant application does not disclose numerical values of either the first or the second bias voltages. As result the claim as amended raises new matter. Therefore, claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 72 recites the limitation “wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverse bias voltage” in lines 9-10. However, the recited limitation does not have support in the specification as originally filed for the following reasons:

Mathematically speaking an absolute value of any number is a positive number, i.e., $|+X| = X$ or $|-X| = X$. In order to determine the absolute value of the first and the second reverse bias voltages, the numerical value of these voltages need to be disclosed in the specification as originally filed. The specification as well as the drawings of the instant application does not disclose numerical values of either the first or the second bias voltages. As result the claim as amended raises new matter. Therefore, claim contains subject matter which

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was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 10, 11, 18, 19, 34, 35, 59-61, 65-37, 69-71 and 73-75 are also rejected as being directly of indirectly dependent of the rejected independent base claim.

Remarks

4. The instant application is not rejected under 35 U.S.C. 102 or 103 because prior art of record does not teach the added limitation, i.e., "wherein an absolute value of the second reverse bias voltage is higher than an absolute value of the first reverses bias voltage," as recited in claims 9, 17, 33, 68 and 72. However, prior art of record discloses all the claimed limitation of the instant application except the aforementioned limitation.

If applicants overcome the rejection under 35 U.S.C. 112 first Paragraph that set forth in Paragraph 3 above by providing the Office an evidence that the added limitation is supported by the specification or drawings as originally filed, the rejection may be withdrawn and the claims may be allowed. If applicants canceled the limitation that deemed raise new matter in order to overcome the rejection that set forth in Paragraph 3 above, then upon amendment, if an alternative interpretation of claim language requires a change in the rejection, **the new rejection may properly made final.**

Response to Arguments

5. Applicants' arguments with respect to claim 9-11, 17-19, 33-35, 59-61 and 64-75 have been considered but are moot because the arguments solely based on the claim limitation that deemed raised new matter as set forth in Paragraph 3 above. Therefore, applicants' arguments

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are moot in view of the new ground(s) of rejection that was necessitated by the amendment filed on October 15, 2004.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Maroney, III et al. (US/5,343,054) also disclose similar inventive subject matter.

Correspondence

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brook Kebede whose telephone number is (571) 272-1862. The examiner can normally be reached on 8-5 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (571) 272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brook Kebede
Examiner
Art Unit 2823

Brook Kebede

BK
February 5, 2005